

## Response to Rejections and Objections

Page 1 has been amended to recite priority data. Pages 7 and 14 have been amended to provide sequence ID numbers in accord with the sequence listing previously provided.

Claims 1-7 (Claim 1 having been replaced by claim 8) have been rejected under 35 U.S.C. 112, second paragraph, because the claims do not disclose the sequence identifier. The rejection is respectfully traversed. The position is identified in accord with usual practice and as described in the literature as the amino acid residues at the recited positions in the neurotoxin sequence. The rejection is not understood. The polypeptide from a sequence is consider a contiguous sequence from a larger sequence. It is expected by the inventor that the usual meaning will be applied to the claims, that a contiguous sequence from within the protein at the positions recited as to placement within the protein is what is meant by the claims.

Claim 2 has been rejected under 35 U.S.C. 112, second paragraph as indefinite. It is believed that the amendment to the claim renders that rejection moot.

Claims 1-7 have been rejected under the judicially created doctrine of double patenting. Attached hereto is a terminal disclaimer to overcome that rejection.

Claims 1 (replaced by claim 8) and 2 have been rejected under 35 U.S.C. 102(b) as anticipated by Binz, et al. The rejection is respectfully traversed. A smaller sequence having a particular activity (in the instant case, ability to provide

protective immunity without side effects arising from administration of the entire protein) is not anticipated by the longer sequence which does not provide the advantages of the claimed invention. Binz gives no directions to choose the particular domain identified in the claims for purposes of obtaining benefits taught in the instant specification.

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Claims 1 and 2 have been rejected under 35 U.S.C. 102(b) as anticipated by Thompson, et al. The rejection is respectfully traversed. It is not disputed that Thompson gives the entire sequence of the toxin. What is important in considering patentability is that he gives no direction on how to choose a smaller sequence which will give the benefits taught in the instant specification and which render the claimed invention useful for purposes of providing immune response without causing serious side effects of the whole toxin. Thompson gives no direction on how to choose smaller sequences to obtain the benefits of the instantly claimed invention.

Claims 3-7 have been rejected under 35 U.S.C. 103(a) as unpatentable over Binz in view of Lang, and further in view of Lockman. The rejection is respectfully traversed. The issue is not whether the A2 peptide of cholera toxin is new, but rather that the smaller sequence from botulinum neurotoxin chosen for delivering particular benefit for obtaining protection is not obvious from the prior art. There is no direction indicating how to choose any smaller sequences from the toxin to provide the benefits taught herein. While a species may render a genus

anticipated, a genus does not render a species anticipated or obvious if guidance for choosing the species or subclass is not provided in the reference.

It is believed the claims are now in condition for allowance. If discussion would facilitate prosecution of this application, the Examiner is invited to contact the Applicant's representative at (703) 425-8405.

Respectfully Submitted;

A handwritten signature in cursive script, appearing to read "Glenna Hendricks", written in dark ink.

Glenna Hendricks, Reg. No. 32535